BANGALORE ELECTRICITY SUPPLY COMPANY LIMITED

(Wholly Owned by Government of Karnataka)

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No: BESCOM/GM(DAS/AGM-18/BC-19/
25-26/ 1771

O/o The General Manager(DAS)
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Date: 23.03.2026

Amendment to Technical specification of RMU

SUB: Expansion of Distribution Automation System to Peri-urban areas of Bengaluru city, District headquarters & Industrial areas across BESCOM jurisdiction.

REF: BESCOM/2025-26/OW/WORK_INDENT997 Dated: 13.02.2026.

Consequent to pre bid queries, in view of Expansion of Distribution Automation System to Peri-urban areas of Bengaluru city, District headquarters & Industrial areas across BESCOM jurisdiction, the following Amendments are issued.

Sl.No	Clause No	As per Tender Document	To be read as
1	Section – 6(A) Technical Specifications for Ring Main Units (RMU) Clause: 3.3.1 Current Transformer (Page No.20)	CTs for Metering: Material: Epoxy resin cast Burden: 2.5VA Ratio: 400-200/1 A Accuracy Class: 0.2S. CTs for Protection: Material: Epoxy resin cast Burden: 5VA Ratio: 400-200/1 A Accuracy Class: 5 P 20.	**For LBSs** CTs for Metering: Material: Epoxy resin cast Burden: 2.5VA Ratio: 400-200/1 A Accuracy Class: 0.2 **For CBs** CTs for Protection: Material: Epoxy resin cast Burden: 5VA Ratio: 200-100/1 A Accuracy Class: 5 P 20.
2	Section – 6(A) Technical Specifications for Ring Main Units (RMU) Clause: 3.3.2 Voltage	Potential transformers shall be provided. The burden per transformer shall be no more than 50 VA and the voltage ratio shall be 11kV/√3/110V/√3. The accuracy class shall be 0.5.	Potential transformers shall be provided. The burden per transformer shall be no more than 50 VA and the voltage ratio shall be 11kV/√3/110V/√3. The accuracy class shall be 0.2.

	transformer (Page No.20)	HRC fuses shall be provided on the HV side. Secondary terminals shall be brought out suitably to a terminal block, which will be easily accessible for testing and terminal connections	HRC fuses shall be provided on the HV side. Secondary terminals shall be brought out suitably to a terminal block, which will be easily accessible for testing and terminal connections
3	Section – 6(A) Technical Specifications for Ring Main Units (RMU) Clause: 3.6 Power supply	The batteries shall be of Lithium Iron Phosphate (LiFePO4) type and shall have a minimum life of five (10) years at 25oC.	The batteries shall be of Lithium Iron Phosphate (LiFePO4) type and shall have a minimum life of Ten (10) years at 25°C.
4	Section – 6(A) Technical Specifications for Ring Main Units (RMU) Clause: 3.12 Control Cabinet	The Control Cabinet shall include a weather-sealed hole with a double compression cable gland, approximately 30 mm in diameter, on the top of the cabinet for routing an antenna cable that will be supplied and installed by BESCOM.	The Control Cabinet shall provide sealed box at an height of 40 inches from the base of the RMU and 5 inches from the front side of the RMU for routing an antenna cable. The sealed box shall include 2 numbers of weather-sealed hole with a double compression PVC cable gland, approximately 25 mm in diameter.
5	Section – 6(A) Technical Specifications for Ring Main Units (RMU) Clause: 3.2 Parameter Requirement Table 3-3: Load Break Parameters	Rated Short Circuit Making capacity: 50 kA peak at rated voltage (both LBS, Disconnector & Earthing Switch)	Rated Short Circuit Making capacity: 52.5 kA peak at rated voltage (both LBS, Disconnector & Earthing Switch)
6	Section – 6(A) Technical Specifications for Ring Main Units (RMU) Clause: 3.12 Control Cabinet (Page No.31)	A number lock of adequate size shall be provided	A number lock/Digital lock of adequate size shall be provided
7	Section – 6(A) Technical Specifications for Ring Main Units (RMU) Clause: 3.5 Protection relay (Page No.21)	The RMU shall be equipped with SCADA based numerical relays as used to trip the RMU circuit breakers.	The RMU shall be equipped with SCADA based self-powered draw out type numerical relays as used to trip the RMU circuit breakers.

8	Section – 6(A) Technical Specifications for Ring Main Units (RMU) Clause: 2.7.4 Terminal Block (Page No.11)	Terminal blocks shall comply with latest IEC standards.	Terminal blocks shall comply with IEC 60947-7-1 standards.
9	Section – 6(A) Technical Specifications for Ring Main Units (RMU) Clause: 3.2 Parameter Requirements Table 3-2: Circuit Breaker Parameters (Page No.15)	-	AFLR for RMU SF6 Tank & Cable chamber - IAC AFLR 21 kA for 1 sec.
10	Section – 6(A) Technical Specifications for Ring Main Units (RMU) Clause: 3.5 Protection Relay 3.5.1 General (Page No.21)	The Circuit Breaker enclosures in the RMU shall be outfitted with a communicable-type numerical self powered relay, i.e., one for each outgoing circuit breakers. The relay shall interface with the RTU via an RS485 port in order to send, receive or configure parameters, to provide status and control the relay reset in real time and shall have the capability of time synchronization from RTU using the Standard MODBUS protocol address defined by BESCOM.	The Circuit Breaker enclosures in the RMU shall be outfitted with a communicable-type numerical self powered draw out type relay, i.e., one for each outgoing circuit breakers. The relay shall interface with the RTU via an RS485 port in order to send, receive or configure parameters, to provide status and control the relay reset in real time and shall have the capability of time synchronization from RTU using the Standard MODBUS protocol address defined by BESCOM.
11	Section – 6(A) Technical Specifications for Ring Main Units (RMU) Clause: 3.2.1 Design Details (PageNo.17)	Minium gap between bushing to bushings inside all the cable compartments for proper cable termination will be finalized during design stage.	Minimum gap between bushing to bushings inside all the cable compartments for proper cable termination shall be 110mm
12	Section – 6(A) Technical Specifications for Ring Main Units (RMU) Clause: 3.2.1 Design Details (Page No.15)	The RMU shall be designed to operate at the rated voltage of 12 kV. It shall consist of two (2) numbers of 630 Amp SF6 insulated Load Break Switches as	The RMU shall be designed to operate at the rated voltage of 11 kV. It shall consist of two (2) numbers of 630 Amp SF6 insulated Load Break Switches as incomers and up to three (3)

		incomers and up to three (3) numbers of 630 Amp SF6 insulated Circuit Breakers. .	numbers of 630 Amp SF6 insulated Circuit Breakers, the SF6 gas chamber shall be of Stainless steel 316L grade with a minimum thickness of 2.5mm and Copper Busbar of Suitable size required for 630A shall be provided as per applicable IEC standard.
13	Section – 6(A) Technical Specifications for Ring Main Units (RMU) Clause 3.12 Control cabinet (Page No.31)	The Control Cabinet shall be similar in style and finish as the other RMU enclosures. This shall include having a minimum protection class of IP 56 or better.	The Control Cabinet shall be similar in style and finish as the other RMU enclosures. This shall include having a minimum protection class of IP 56 or better and can withstand external mechanical shocks not less than IK10 as per IEC 62262 standards.
14	Section – 6(A) Technical Specifications for Ring Main Units (RMU) Clause: 3.11 Enclosure (Page No.30)	Constructed of stainless steel (316L) according to IEC 60529 with IP rating 67 or better. Alternatively, the RMU metal parts shall be made of high thickness high tensile steel/CRCA which must be grit/shot blasted, thermally sprayed with Zinc alloy, phosphate, and subsequently painted with polyurethane based powder paint, the overall paint layer thickness including Zinc spraying shall be of the order of 120 microns.	Constructed of stainless steel (316L) according to IEC 60529 with IP rating 56 or better and can withstand external mechanical shocks not less than IK10 as per applicable IEC standards. Alternatively, the RMU metal parts shall be made of high thickness high tensile steel/CRCA which must be grit/shot blasted, thermally sprayed with Zinc alloy, phosphate, and subsequently painted with polyurethane based powder paint, the overall paint layer thickness including Zinc spraying shall be of the order of 120 microns.
15	Section – 6(A) Technical Specifications for Ring Main Units (RMU) Clause: 3.2 Parameter Requirements (Page No.15)	The RMU shall be capable of withstanding the specified currents without damage in accordance with IEC 62271-102 and IEC 62271-1 (Common Specifications for High-Voltage Switchgear and Control Gear Standards) and IS 3427 (AC Metal Enclosed Switchgear and Control Gear for Rated Voltages above 1 kV and up to and including 52 kV).	The RMU shall be capable of withstanding the specified currents without damage in accordance with IEC 62271-102 and IEC 62271-1 (Common Specifications for High-Voltage Switchgear and Control Gear Standards) and IS 3427 (AC Metal Enclosed Switchgear and Control Gear for Rated Voltages above 1 kV and up to and including 52 kV). The rated cable charging interrupting current shall be 25Amps as per IEC 62271-103.

16	Section – 6(A) Technical Specifications for Ring Main Units (RMU) Clause: 2.5 Surge Voltage Suppression (Page No. 10)	The RMU shall be designed to operate on input power containing voltage spikes. Equipment shall be protected against part failure or malfunction such as intermittent firing of triggering devices due to surge voltage spikes occurring randomly over the instantaneous supply voltage.	The RMU shall be designed to operate on input power containing voltage spikes. Equipment shall be protected against part failure or malfunction such as intermittent firing of triggering devices due to surge voltage spikes occurring randomly over the instantaneous supply voltage. Dedicated Surge Protection Devices (SPDs) shall be provided to RS-485 meter-relay communication ports.
17	Section – 6(A) Technical Specifications for Ring Main Units (RMU) Clause: 2.7.4 Terminal Blocks(Page NO. 11)	All individual status input, AC voltage input, and control output points shall be isolatable without the need to remove wiring by means of individual terminal blocks of the removable link type. In order to avoid open circuits on the secondary side of CTs, termination blocks with by-pass bridges shall be provided for all AC current inputs.	All individual status input, AC voltage input, and control output points shall be isolatable without the need to remove wiring by means of individual terminal blocks of the removable link type. In order to avoid open circuits on the secondary side of CTs, termination blocks with by-pass bridges shall be provided for all AC current inputs. MFM and relay Communication RS-485 cable wirings shall be terminated on terminal blocks.

All other terms and condition of Technical specification document of RMU remains unaltered.

General Manager (Ele)

DAS, SG & TIC, BESCOM